REMARKS/ARGUMENTS

Claims 1-8 and 14 are pending in this application. This paper is a supplemental response to the applicants' response to the Offices' action field on September 19, 2006. Claim 1 is amended herein to recite that the transgenic mouse is homozygous in order to overcome an outstanding objection. Specific support for this amendment is recited in the specification. No new matter is added by way of this amendment.

In the previous, final rejection, the Office stated that the declaration of the inventor, Richard L Moss could not support enablement for the production of a transgenic mouse because the data in Professor Moss' declaration refers to the transgenic animal as a S341G mutant. As explained further below, while this nomenclature is correct when referring to the animal based on the canonical nomenclature standardized in the field to chicken pectoralis myosin, the actual residue in the mouse sequence occupies residue 342.

Rejections Under 35 U.S.C. §112, first paragraph

Claims 1-8 and 14 are rejected under 35 U.S.C. §112 because, while the Office states that while all the limitations of claim 1 are enabled the Office does not find the declaration of the inventor Richard L. Moss (the July 10, declaration) convincing because of a discrepancy in the nomenclature used to identify the nucleic acid mutation. Specifically, the Office states "the specification is enabling for a transgenic mouse whose genome contains a nucleic acid encoding a mouse cardiac alpha myosin heavy chain including a substitution of loop 1 of mouse cardiac alpha myosin heavy chain by a non-mouse myosin heavy chain loop 1 (ATPase loop), comprising of pig/rat β MHC loop 1 substitution and the interactive micro-domain of said alpha

myosin heavy chain thereby, reducing an ADP dissociation rate of said mouse cardiac alpha myosin heavy chain . . . does not reasonably provide enablement for a transgenic mouse wherein said substitution comprises an S342G mutation in said loop. The specification does not enable any person skilled in the art to which it pertains or with which it is most nearly connected to make and use the invention commensurate in scope with these claims." The Office further states that "Figure 1 of the inventors declaration shows the S341G KO PCR and S342G WT PCR results obtained from PC-based genotyping designated to identify the S341G gene in the transgenic mice and figures 2A and 2B depicting the graphs plotting the rate of force redevelopment of Wt and S341G transgenic mice does not correlate to Table A showing the absolute force generated by the S342 transgenic mice and the wild type control and the Table B showing the heart rate of the S342G transgenic and the wild type control." Thus, the Office concludes that the July 10, declaration cannot support enablement for the production of the S342G transgenic animal.

Applicant's regret the confusion the use of the conventional nomenclature in referring to the mouse myosin amino acid residues has caused. As explained in the specification, the conventional nomenclature for characterizing the myosin protein residues is based on Chicken pectoralis myosin (being the first to be sequenced and characterized). This naming convention is described in the specification at page 15, line 20, page 19-20, lines 14-5, page 39, lines 1-5 and in the alignments provided in the specification at pages 59-60. However, applicant's would like to clarify that the transgenic animal described and disclosed in the specification has been made and further that its physiological characteristics are in accordance with those described in the specification. To that end, Professor Moss has provided a clarifying declaration, attached hereto, in which he describes his production of the transgenic animal physiologically and genotypically

using the amino acid nomenclature used in the specification. Professor Moss identifies that the animal previously described in his July 10, 2006 declaration as an S341G mutant is the same as the animal claimed in the application as an S342G mutant and that, contrary to the Offices concern that the transgenic animal described in the specification has not been produced, the S342G transgenic mouse has been produced and characterized.

Finally, the Office rejected claim 1, in the Final Action, because the language of claim could allegedly encompass heterozygous as well as homozygous mutants. While applicants had previously explained that the establishments of a transgenic animal line a priori requires the animals to be homozygous, in order to put the application in order for allowance, the applicants herein amended claim 1, to recite that the mouse is a homozygous transgenic. Specific support for this amendment is found in the specification at, for example, page 54, lines 11-14. Thus, the rejection is overcome and should be withdrawn.

CONCLUSION

In view of the amendments and arguments presented herein, applicant respectfully requests entry of this after final amendment and re-consideration of the rejections and allowance of the claimed invention. Applicant requests that the Examiner telephone the undersigned in the event a telephone discussion would be helpful in advancing the prosecution of the present application. The Director is authorized to charge any additional fees or underpayment of fees regarding this response, including extensions for reply, to Deposit Account 07-1509.

Respectfully submitted,

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